

**Moderator's Committee on Waste Disposal  
Meeting Minutes**

November 5, 2009  
Town Hall Room 408

Members Present: Frank Freidman, Kenneth Goldstein, Matthew Kleiman, Adam Mitchell, Virginia Smith, Raymond Wise

Members Absent: Thomas DeMaio, Gerald Koocher, Stanley Spiegel.

The Notice of Meeting was properly filed and posted, as required by law.

Upon motion duly made and seconded, the Committee unanimously approved the minutes of the Committee's October 1, 2009 meeting.

Upon motion duly made and seconded, Raymond Wise was elected Vice-Chair of the Committee.

Brook Nash, of the Municipal Waste Reduction Program at the Massachusetts Department of Environmental Protection, spoke about Municipal Waste Reduction Strategies. Ms. Nash's presentation slides are attached.

Bob Cappadona and Andrea Younge of Cassella Waste Systems, Brookline's recycling contractor, spoke about single stream recycling and Cassella's processing center.

The next meeting was established for December 3, 2009 in Town Hall Room 310.

The meeting was adjourned.

# Municipal Waste Reduction Strategies

Brookline Moderator's Committee  
on Waste Disposal  
November 5, 2009

## Solid Waste & Climate Change

- For every ton of waste discarded...71 tons of waste upstream
- By reducing waste we:
  - reduce methane emission from landfills
  - reduce emissions from incinerators
  - reduce energy consumption, fossil fuel use
  - increase storage of carbon in trees
- New EPA report: 42% of GHG emissions from materials management and food production

## Solid Waste & Climate Change

- Reducing waste is the simplest, most immediate action local government can take to reduce their carbon footprint.
- Infrastructure is already in place
- Program has broad reach; key is to maximize participation
  - household level
  - municipal buildings
  - local business

## Terminology

- Material Recovery Facility (MRF)
- Dual stream recycling
- Single stream recycling
- Fully and semi-automated collection (carts)

## Single Stream Recycling

- The storage of all recyclables (bottles and cans and all paper) mixed together in a single container
- Collection and transport of the mixed recyclables in a single compartment on the truck
- Separation of the mixed recyclables mechanically and with labor at a processing facility

## National Trends

- West coast leading East Coast (reversal from 20 years ago)
  - Single stream
  - Automated collection
  - Organics collection, 3 cart system
- Mandatory commercial recycling
- Extended Producer Responsibility

## Waste reduction programs

- **Pay-As-You-Throw – 130 communities**
  - 25-50% reduction in trash
  - 15-30% increase in recycling
- **Single Stream Recycling – 50 communities**
  - Minimum 20% increase in recycling with carts
- **Automated collection – 25 communities**
  - Industry driven; lower collection costs, worker injuries
- **Enforcing mandatory recycling**
- **Two Cart System**

## Mandatory Recycling

- 160 municipalities with mandatory recycling ordinances
- Approx 40 actively enforcing
- Success in Chelmsford, Andover, North Andover, Billerica, Saugus
- 10% reduction in trash tonnage
- Emphasis on cardboard or “visible recyclables”
- Requires strong hauler partnership, significant outreach, ongoing enforcement

## Single Stream Recycling

- 4 of 6 Mass MRFs are now SSR
- 50 communities have SSR including:
  - Ashland, Attleboro, Boston, Dedham, Framingham, Mansfield, Natick, Newburyport, North Attleboro, Norwood, Worcester
- Large containers are key to success
- Automated recycling collection
- “Modified” single stream
  - use existing “blue bins” or provide decals for residents to label their own larger container (Quincy, Braintree, Weymouth)

## Single Stream

### **Advantages:**

- Significant increase in recycling tonnage
  - Greater number participating households
  - Greater amount of recyclables per participating household (capture rate)
- Savings in avoided disposal costs
- Increases collection efficiency (truck capacity, labor, worker injuries)
- With large cart – can reduce recycling collection to bi-weekly

### **Disadvantages:**

- Less revenue per ton than dual stream recycling
- Capital costs of carts, trucks

## Automated Collection

- Trash or recyclables
- Fully or semi-automated
- Carts and mechanical lift arm
- Trash: capacity of container sets trash limit
- Recycling: offers greater capacity than set-out bins
- 1<sup>st</sup> year results:
  - Holden (automated T & R): trash down 30%, recycling up 73%
  - Mansfield (automated T only): trash down >20 %, recycling up 13 %

## Pay As You Throw (PAYT):

- Single most effective program for reducing waste and increasing recycling
- Like a utility: users pay for amount of waste disposed; unlimited recycling
- 130 communities in Mass (50 curbside)
- Trash tonnage decreases 25-50%
- Recycling tonnage increases 15-30%
- Average recycling rate in PAYT communities is 10 percentage points higher than non-PAYT

## PAYT

- Various models: Bags, stickers, or first bag/barrel “free”
- Fixed costs = tax base or annual flat fee
- Variable costs = bag or sticker fee
- Very compatible with single stream (16 Mass programs with both)
- “Modified” PAYT (e.g. Lowell, Burlington, Billerica, Tewksbury, Tyngsboro, Holden, Mansfield)

## Recycling and PAYT Research

- 2005 opinion research survey on recycling
- Self reported recycling behaviors
- 60% of PAYT residents “always” recycle across all categories (vs. 39% of non-PAYT residents)
- 75% of non-recyclers say they “would recycle more if trash cost \$, recycling was free” (vs. 59% statewide).



## PAYT Works

Town	Pre-PAYT tonnage		Post-PAYT tonnage		% Change	
	Trash	Recycling	Trash	Recycling	Trash	Recycling
Malden	20,750	8	10,428	3,559	49%	74%
Attleboro	17,162	2,974	11,287	3,910	-34%	31%
*Dartmouth	10,690	1,587	5,121	2,445	-52%	54%
Longmeadow	5,008	2,052	3,788	2,362	-24%	15%
Marshfield	9,471	2,704	6,711	3,544	-29%	31%
Shrewsbury	10,686	3,057	6,531	3,569	-39%	16%

\* Extrapolated from 7 months of data

## PAYT Works....

- Of the 50 highest municipal recycling rates in Mass – only 10 are in non-PAYT communities
- 13 communities implemented PAYT in past 18 months
- Diverse communities, including:
  - working class (Malden)
  - suburban (Shrewsbury, Hamilton, Duxbury)
  - rural (Athol, Sunderland), and more.

## PAYT and Single Stream

- North Attleboro
- 10 year old PAYT program
- Flat fee plus bag fee
- July - SSR implemented with 95 gallon carts
- Bi-weekly curbside recycling
- Recycling tonnage up 15%-20%
- Small trash bag sales - up

## What are the challenges?

- It takes time to “do it right” (Malden v. Shrewsbury)
- Perception that “it’s a tax”
- Politics, politics, politics
- Start-up costs (education, staff time)
- Concerns about illegal dumping

## In Brookline....

- Flat fee makes for easier transition
- For most residents, program will be revenue neutral
- Highest “users” of municipal trash program will pay more
- Multi-family program - Malden
- Foot traffic for local vendors (bag sales)
- Single stream with carts – ideal coupled with PAYT

## Annual Recycling Per Household

<u>Town</u>	<u>Recyc/HH</u>
Brookline	731
Dartmouth	926
Milton	729
Natick	998
Medway	1,144
Northampton	1,113

## For more information...

- Brooke Nash, Branch Chief  
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Municipal Waste Reduction Program  
617-292-5984
- [Brooke.nash@state.ma.us](mailto:Brooke.nash@state.ma.us)
- [www.mass.gov/dep/recycle](http://www.mass.gov/dep/recycle)